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Moving beyond *methodising* theory in preparing for the profession

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ABSTRACT

For those preparing for outdoor education and related professions, formal theory has an important role to play in terms of informing professional practice and understandings of teaching-learning dynamics. Despite this, surprisingly little is understood about how pre-service outdoor educators (POEs) view and engage with it in their preparation courses. Drawing on findings of a case study in an Australian outdoor education teacher education (OETE) course, this article explores POE theory engagement focussing on a problematic tendency to *methodise* formal theory, that is, to treat theories as formula for action. The authors argue that this tendency is concerning because it ignores the complexity and problematic nature of both theory–practice relationships and outdoor education pedagogy. The discussion highlights contributing factors and implications for OETE, especially with respect to enabling aspiring outdoor educators in tertiary courses to move beyond *methodising* theory as they enter the outdoor profession.

KEYWORDS

Outdoor education; theory–practice relationships; teacher education; praxis; preservice teachers

Introduction

Outdoor education, like any educational profession, is an interplay between theory and practice. It is an interplay between what outdoor educators say (sayings), what they do (doings), and how they relate (relatings) as they go about their everyday work, as well as the ideas that inform and reflect their sayings, doings, and relatings (Kemmis et al., 2014). This is so whether those ideas are tacit understandings embedded in the practice traditions (Kemmis, 2010) of doing outdoor education (*implicit theory*), or sanctioned, public, generalisable, empirically derived theories (referred to in this paper as *formal theory*) that educators encounter in outdoor education courses, professional learning activities and discourses, and professional literature.

In programs that prepare teachers for the outdoor education profession, the theory–practice interplay has a crucial role. Many programs are explicitly grounded in formal theory, not because it is more important than other kinds of theory (such as implicit or personal theory), but because of the recognised potential of formal theory to help aspiring and practising outdoor educators understand teaching and learning processes and develop as professional, informed, and critically reflective educators. However, preservice outdoor educators (POEs) do not always engage with formal theory embedded in courses in ways that we might expect or hope.

Our aim in this paper is to explore this. In particular, we focus on a concern emerging in an outdoor education (OETE) course in which both authors were teacher educators, that is, a concern about POEs conceptualising and engaging with formal theory in a very technical way. We found that

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there was a tendency among some POEs to *methodize* formal theory by treating formal theories as formula for action. While this is encouraging from a teacher educator perspective if POEs are valuing and engaging with formal theory, it is also problematic since it ignores the complex, uncertain, and moral/political nature of educational practice (Deng, 2004); it disregards the importance of ethical and context-sensitive judgement and decision-making (Deng, 2004). According to several writers exploring theory–practice relationships in teacher education, it is common for pre-service teachers to hold technically oriented views of theory in relation to practice (e.g. Deng, 2004; Sjølie, 2014b). However, we think it has particular implications for POEs because of added complexities, risks, and challenges involved with teaching and learning in dynamic natural environments (Galloway, 2002). A deep understanding of such issues and how teacher educators can challenge or inadvertently perpetuate technical orientations towards formal theory are therefore important.

To explore POEs' engagement with formal theory in this paper, we draw on a qualitative case study (Yin, 2006) that investigated, among other things, POE engagement with formal theory within a particular university-based OETE course. The aim of the study, which involved both authors as co-participants, was to understand tensions and issues related to the theory–practice nexus in the course in terms of (a) course design, (b) teacher educator teaching practice (see Clayton, Smith, & Dymont, 2014), and (c) pre-service outdoor educator (POE)¹ engagement with theory and practice. It is the analysis concerning part (c) that is of relevance to this paper.

The study raised questions for us that we reflect upon as part of our discussion here: why were some POEs embracing and engaging deeply and critically with formal theory during the course, while others were treating it as sets of procedures to follow in their teaching and leading practices? What was contributing to more technical understandings? What could we (teacher educators) do more of, or differently, to help POEs move beyond these technical understandings? We discuss these questions with reference to Shirley Grundy's (1987) explication of 'forms of educational practice' (based on Habermas', 1972, theory of knowledge constitutive interests).

We begin our discussion by considering previous research on pre-service teachers' engagement with theory, mostly in teacher education literature since very little has been written about this, to our knowledge, in outdoor education and related fields. We then briefly introduce the study and Grundy's (1987) ideas before discussing POE engagement with theory in our course and implications for our own practice and outdoor education teacher education more broadly.

In this paper, *theory* is understood as concepts, principles, or assertions 'that both arise out of, and inform teaching and outdoor leading practice' (Clayton et al., 2014, p. 2). This includes personal, formal, and implicit theory². However, our discussion focusses particularly on *formal theory*, so references to theory from this point imply formal theory unless otherwise stated. References to *practice* throughout relate to *professional practice*, which we conceptualise as human activity comprised of the sayings, doings, and ways of relating that cohere in distinctive 'projects' (Kemmis et al., 2014, p. 33) or particular ends (in this case, the pedagogical ends of outdoor education as a professional practice).

Pre-service teachers and formal theory

Formal theory is regarded as important in teacher preparation (as in the ongoing professional learning of educators) for several reasons with which we concur. It is seen as having a critical role in terms of understanding or making sense of practice (Deng, 2004; Knight, 2015; Nilssen & Solheim, 2015), as well as problematising, and problem-solving in relation to, practice. It is also viewed as helpful for conceptualising the role of educators and approaching practice in a more thoughtful and critical way (Giraldo, 2008; Knight, 2015); enabling preservice teachers to more precisely articulate their observations and understandings about practice and student learning (e.g. Nilssen & Solheim, 2015); and rationalising practical judgements (McDonough, 2012). In the outdoor education profession specifically, there has been a notable history of pointing out how various theories underpin and directly inform practice (e.g. Martin, Breunig, Wagstaff, & Goldenberg, 2017; Priest & Gass, 1997/2005/

2017). Theory is widely seen as relevant to professionalism as reflected in Boyes' (2004) depiction of the 'learned professional', capable, among other things, of 'tak[ing] a much more informed and critical viewpoint based on research and relevant theory' (p. 82).

Despite the recognised importance of formal theory, studies have shown that pre-service teachers do not necessarily engage with it to the extent and in ways that those facilitating their courses might hope. Some preservice teachers do engage at a deep level, as shown in research by Garvey and Vorsteg (1995), Knight (2015), and Sjølie (2014a). However, a number of studies point to either superficial engagement or disinterest in formal theory on the part of preservice teachers during at least part of their courses. This level/lack of engagement is commonly linked by researchers to a lack of understanding of theory and its relationships to practice and/or a perceived lack of relevance to their immediate experiences and concerns (Allen, 2009; Sjølie, 2014a). According to researchers such as Russell (1988), Sjølie (2014a), and Ketter and Stoffel (2008), some preservice teachers do indeed have difficulty making sense of, or seeing the value and relevance of formal theory.

Of particular relevance for this paper is a widespread concern about the prevalence among preservice teachers of a *technical orientation* to formal theory (e.g. Deng, 2004; Giraldo, 2008; Tuinamuana, 2007; McDonough, 2012). By *technical orientation*, we mean a focus on the *how to* of practice (see Giraldo, 2008) and on producing particular products or predetermined outcomes or ends. Preservice teachers with such an orientation are commonly described as

- valuing theory to the extent that it is practical (i.e. relevant or applicable to immediate practical problems—see Knight, 2015; McDonough, 2012);
- viewing theory and practice as dichotomous (Sjølie, 2014a); and
- treating theory as a set of procedures or rules (or formula or recipe) to be applied in practice to bring about particular outcomes (and, as such, something that can be added to a 'bag of teaching tricks' (Loughran, 2006, p. 45)).

A technical orientation is seen by some (including us) as problematic on the basis that it reflects a *narrow or distorted view of teaching* as merely a technical exercise that can be 'reduced to a set of skills' and procedures (Deng, 2004, p. 147; see also Giraldo, 2008). It underplays the complex, uncertain, and socially situated nature of teaching and learning (Brown, 2009; Tuinamuana, 2007). The *ends* of many teaching and learning situations are not fixed or knowable in advance. On the contrary, teaching, as Deng (2004) rightly argues, is a moral endeavour. It 'requires a contextualized understanding which involves bringing to bear on a specific ... context a large number of pertinent concerns' (p. 149).

A technical orientation also signifies a *narrow view of theory* and the potential for the passive consumption of ideas. Formal theory is arguably contestable and subject to change. Furthermore, the development of any formal theory is always mediated by contextual factors linked to the time, place, and circumstances in which the theory is developed (cf. Roberts, 2008). A narrow view of theory ignores these significant points while the passive consumption of ideas can stand in the way of developing a capacity for exercising 'good judgment' (see Deng, 2004, p. 149; McDonough, 2012) and theoretical reflection on/in practice (Giraldo, 2008).

Narrow, technical views of theory and teaching and learning among POEs are relevant to broader concerns in the outdoor education profession about outdoor education pedagogy. Wattchow and Brown (2011) for instance, have been critical of how outdoor educators have taken theories and ideas and implemented them in practical ways, usually simplistically, losing much of the theoretical intent and richness. Some writers have cautioned against the uncritical take up of particular theories such as experiential and constructivist learning theories (see, e.g. Brown, 2009; Ord & Leather, 2011; Roberts, 2008; Seaman, 2008). There has also been a noticeable shift towards more critical discussion of theory and case studies of practice and away from advice on how to *implement theory*. For example, rather than provide detailed activities and lesson plans, Beames, Higgins and Nicol (2012) invite educators to creatively adapt theoretical insights according to their cultural and physical

landscape. Similarly, Irwin, Straker, and Hill (2012) offer insights into *new* ways of doing outdoor education through case studies and discussions of theory, rather than examples of how theory might appear in practice.

Technical orientations towards theory among preservice teachers have been attributed to multiple factors. Among these are factors pertaining to individual pre-service teachers' capabilities, dispositions, and background. For example, Zeichner (1995) identified *meta-cognitive abilities of pre-service teachers*, especially their capacity for reflecting critically, as a contributing factor. Many writers have also discussed *preoccupations with survival* (see Deng, 2004; Francis, 1997; Ketter & Stoffel, 2008; Russell, 1988; Sjølie, 2014a; Wayne Ross, 1992) brought on by concerns about the potential challenges of the new professional environment. Others have drawn attention to the experience/inexperience of the preservice teachers, arguing that, with experience and over time, preservice teachers engage with formal theory in less technical ways (see Knight, 2015).

Factors related to teacher education courses and teacher educator practices have also been identified as relevant to technical orientations towards theory. Such factors include opportunities (or lack thereof) for guided reflection and gaining practical experience; theory 'overload' at certain times during courses (Knight, 2015, p. 154); and how theory and practice are 'dealt with as constructs' in teacher education courses (Dye, 1999, p. 306; see also Deng, 2004; Knight, 2015; Tuinamuna, 2007). The latter relates to teacher education *discourses*. Deng (2004) in particular has problematised the language around 'theory application', linking it to 'the training model' of teacher education (Deng, 2004, p. 144) in which 'theory is translated into a set of steps which preservice teachers are supposed to follow in putting theory into practice' (p. 146).

Such discourses and technical orientations to theory and teaching are commonly linked in literature to *technical rationality*, following Schön (1983). Technical rationality, according to Dunne (2005), relates to

... the goal of mastery and maximisation: everything becomes a means over which one aspires to exercise total control—a control defined in terms of optimal effectiveness in achieving ends, and optimal efficiency in realising most benefit with least cost. (p. 374)

A technical rationality, or instrumentalism, is argued by many to have pervaded education and society generally in recent times (e.g. Dunne, 2005; Sim, 2017), coinciding in part with the rise of economic rationalism or a neoliberalism (see Boyes, 2004; Sim, 2017).

As informative as existing teacher education literature is, there is more to be understood about how we might address these technical tendencies, or how teacher educators might be contributing to technical engagement with theory, especially in OETE. Our aim in this paper is, therefore, to stimulate further conversation about this in the outdoor education field, drawing on a particular investigation to illustrate the points we are making. The next section provides brief background information about this investigation, conducted as a case study.

The OETE case study

The study was based on a 2-year outdoor education teaching specialisation embedded in a 4-year teaching degree at an Australian university. A case study approach was chosen to enable a *close-up*, contextualised understanding of how theory–practice relationships were understood and embodied within the course. The focus of the investigation was on teacher educator perspectives. These were gleaned primarily through face-to-face and semi-structured interviews with the three teacher educators involved with the course, including the authors of this paper. The interviews were conducted by the first author, except in her own interview where another teacher educator stepped in as interviewer. Lesson observations, document analysis, and a focus group interview with six POEs in the course provided supplementary material and allowed access to POEs' perspectives as well. Analysis in the study involved an iterative coding process (Saldana, 2009) informed by an analytical

framework combining Grundy's (1987) forms of educational practice (outlined below) and Thomas' 'dimensions of facilitator education' (2008, p. 169).

The course itself comprised seven units that prepared pre-service teachers for teaching outdoor education. Field-based experiences, incorporating a variety of social-group, nature-based, and sometimes adventure-based activities, were important components of the course. They supplemented tutorials, lectures, and microteaching experiences by providing opportunities for POEs to gain experiences that could become points for discussion and/or analysis of theory and practice related to teaching and learning in the outdoors. Formal theory relevant to the course included educational theory and leadership theory, but also theory drawn from environmental science/ecology, psychology, sociology, risk-safety management, and theory specific to outdoor pursuit areas.

Enrolment in the course was approximately 15 people (20 maximum per cohort). Typically, the pre-service teachers were physically active, worked part-time, and were educated in local schools. Only a small number had experienced outdoor education as school students or had prior experience in outdoor pursuits (e.g. paddling, bushwalking, climbing). Reasons offered anecdotally for enrolling in the OETE course included keeping career options open, preparing for outdoor education teaching, expanding skill-sets, personal development, fun, and challenge.

Grundy's forms of educational practice

In *Curriculum: Product or Praxis*, Grundy (1987) provided an interpretation of Habermas' (1972) theory of knowledge-constitutive interests that is useful for understanding how educators conceptualise the relationship between practice and (implicit and formal) theory. This is in turn useful for understanding why and how people engage with theory in particular ways, including in educational practice. The theory of knowledge-constitutive interests is an account of 'fundamental human interests which influence how knowledge is "constituted" or constructed' (Habermas, 1972, as cited in Grundy, 1987, p. 7). According to this theory, knowledge and action are determined by one of three basic cognitive interests:

- (1) a *technical interest*—an interest in 'survival through control and manipulation of the environment' (Grundy, 1987, p. 27).
- (2) a *practical interest*—an interest in 'understanding the environment through interaction based upon a consensual interpretation of meaning' (Grundy, 1987, p. 14).
- (3) an *emancipatory interest*—an interest in 'emancipation and empowerment to engage in autonomous action arising out of authentic, critical insights into the social construction of human society' (Grundy, 1987, p. 19).

Grundy associated a *technical interest* with a deterministic understanding of theory–practice relationships whereby theory is believed to determine or direct practice. On this view, theory is conceived as a set of rules and procedures that direct action, and it is valued as a means of gaining and maintaining *control* of circumstances in practice to achieve particular ends. This resonates with Dunne's (2005) depiction of technical rationality noted above. Grundy linked a *practical interest* with a view that theory may guide, but not direct, practice. Understanding, she argued, 'arises from reflective deliberation upon the situation, upon the previous action and upon theoretical explanations which may assist interpretation' (p. 88). This reflectively- or reflexively generated knowledge informs future action, which becomes a form of praxis. Grundy similarly associated an *emancipatory interest* with a view that theory and practice are reflexively related, but with critical theory/insights playing a key role in reflective and reflexive deliberation in practice, leading to critical consciousness and action (emancipatory praxis). This interpretation of Habermas' theory was helpful for reflecting on the ways in which POEs engaged with theory in our OETE course, and is drawn upon in the following discussion of relevant study findings.

POE engagement with theory in our course

Not surprisingly, the ways in which the POEs engaged with theory in the course varied. The variations were evident in the POEs' explicit reflections (in written work and in conversations) on their own teaching, on others' teaching, and on course content/processes, as well as in their teaching practice. POE engagement, according to the teacher educators, ranged from embracing theory and/or deep engagement with theory (critically for a few) to disinterest or superficial engagement with theory. This variation appeared to be linked to variations in understandings about theory–practice relationships, for instance, those that were more reflexive in orientation to those that were more firmly technical, although there were other contributing factors.

Deep engagement with formal theory exhibited by some of the POEs included, for example, engaging enthusiastically in theory–practice discussions and unprompted reflective conversations examining theory and practice in light of each other, or intentional and explicit grounding of teaching and leading practice in theory. This intentionality (Thomas, 2008) and an apparent *practical interest* was evident in the POEs' discussions with us and with each other about their leading and teaching practices before and after the activities they facilitated. In contrast, some of the POEs engaged with theory on a superficial level. This was reflected in the minimal interest shown in theory, or even resistance as exemplified in the following teacher educator comment: *'they weren't engaging with the theory, in a way. They thought, "This is stupid and it's not related," and came with that real notion that [on] outdoor ed. field trips "We just go and have fun, and stop making us work"'*. POEs who assumed such a position, according to the teacher educators, regarded theory as irrelevant or less important and less 'fun' than activities and skills-based work. They were seen as 'passive recipients' (Grundy, 1987, p. 101) who were merely *'ticking boxes'*, content to *'stay in base camp'* while others were on their way to *'the summit'*.

The group of POEs of interest for this paper, however, were those who were *'open to theory'* or that saw theory as relevant and important *if* it could be *applied* directly to practical situations. According to the teacher educators, theory was treated or adopted by these POEs as *'formula'* for practice, suggesting an underlying *technical interest*. They were using the theory as a tool for producing predetermined outcomes in teaching/leading and learning situations rather than using the theory to inform their reading/interpretations of what was happening in practice and decisions about what to do. In this sense, the POEs concerned allowed theory to dictate how they proceeded in practice, thereby rendering teaching/leading practice a form of technical, rule-following action (see Grundy, 1987). One of the teacher educators conceptualised this as a tendency to *'methodise theory'*. An example—not uncommon in the outdoor education profession, in Australia at least—was the use of Kolb's experiential learning cycle (see Kolb, 1984) as a step-wise process that students could be guided through in practice.

The tendency to *methodise* theory was a concern for us in that POEs were apparently not seeing the need to understand the particularities of situations at hand (e.g. respond to what is happening in the actual teaching and learning moments or activities with real participants in real and dynamic environments and circumstances) and to exercise professional judgement regarding the most appropriate ways to respond to those particularities (i.e. enact praxis). That said, there was a suggestion that, in *methodising* theory, the preservice teachers were *'at least'* engaging with theory and that it might lead them to *'think a bit more broadly about other theories'* (Teacher educator). Perhaps it was a starting point for engaging more, or more deeply, with theory:

We need to ... alert them to the fact that they're doing it, but in a way ... welcome that they're even considering the theory out there, even if they methodise it. So ... "Oh here's Kolb's cycle of experiential learning ... Oh step one ... " Maybe that's a start. (Teacher Educator)

Despite this positive *take* on the tendency of some preservice teachers to *methodise* theory, it was important for us to reflect on and understand what might have been encouraging, reinforcing, or contributing to a technical orientation towards theory and practice—or in Grundy's terms, an

underlying technical interest—including aspects of our own practice. It appeared to the teacher educators that a more technical orientation could be attributed in part to the preoccupations and prior experience of the POEs.

One crucial factor seemed to be the POEs' relative newness to the practice of teaching. Such *newness* has been associated by several researchers with a pre-disposition to focusing on survival concerns (e.g. Francis, 1997; Ketter & Stoffel, 2008; Russell, 1988; Wayne Ross, 1992). An instructive case in point is the self-study by Ketter and Stoffel (2008) in which Stoffel, a former student of Ketter's, commented that he did not appreciate the value of the formal theory until he 'learned how to survive' (p. 141). From the perspective of Grundy's work, concerns for survival in teaching acts are directly related to a 'technical interest' and a need to control one's environment. Survival preoccupations may have been a factor for our students when in unfamiliar teaching and outdoor leading situations. Certainly, their teaching and outdoor leading experience played an important mediating role. A deterministic (Grundy, 1987) understanding and treatment of theory in relation to practice was more evident before the first school-based practicum, while deeper levels of engagement with theory and understanding of theory–practice relationships were more visible in the POEs' final year, that is, after several opportunities to teach and lead (including in practicums and field trips). Our observations in this regard were consistent with research findings presented by Russell (1988) highlighting that an accumulation of teaching experiences improves a teacher's ability to see how theory and practice relate.

Particularly significant, given the discipline/field,, was the perceived mediating role of the POEs' experience in, and familiarity with, outdoor environments and outdoor pursuits. Many enrolled in the course with minimal prior experience in the wilderness and/or in the course's core outdoor activities (such as paddling, climbing, multi-day hiking). As one teacher educator pointed out in her interview, those students who were not already comfortable or skilled in the relevant outdoor pursuits found it difficult to even think about the theory because they were too busy trying to survive in a very literal sense. The lack of familiarity with the physical environment and activities meant that POEs were necessarily focussed on gaining and maintaining control (over their bodies and the physical environment) and the focus on survival appeared to preclude reflection (for some at least) at a meta-cognitive level.

Although the POEs' preoccupations and prior experience may have been salient factors, the investigation raised questions about whether we were going far enough in the course and our practices to challenge technical conceptions of, and engagement with, theory³. We all acknowledged at some stage in the study that we needed to be more explicit in our treatment of formal and implicit theory in relation to practice, especially in order to promote understanding of relevant formal theory and its relationship to practice. One teacher educator commented, '*I think it's [i.e. theory is] so embedded they sometimes miss it*'. We were employing a range of strategies to promote exploration of theory and practice but perhaps not to the extent necessary. See Clayton et al. (2014) for a discussion of strategies and reflections upon their use.

The study also highlighted how, and the degree to which, a technical orientation towards theory may have been reinforced, however inadvertently, by the curriculum and our own practices. In terms of the curriculum, by continually putting the POEs in unfamiliar environments (e.g. going to different wilderness settings for each field experience), we may have been providing opportunities for POEs to gain experience while at the same time evoking survival concerns and encouraging the dismissal of theory for some, or contributing to its use as a crutch for others. With regard to our practices, we learnt that we sometimes spoke about theory and practice and theory–practice relationships in ways that were contrary to our actual beliefs. In other words, our own theory-practice discourse was sometimes inadvertently technical (e.g. use of 'theory-into-practice'). We were compelled to ask ourselves if we had been contributing 'to the reproduction of narrow conceptions of theory and practice', and therefore particular ways of engaging with theory (Clayton et al., 2014, p. 12).

An important question that emerged for us in reflecting on these issues was what to do about them from a pedagogical perspective; how can we, through curriculum and our own pedagogical

practices, help POEs move beyond *methodising* theory as they enter the outdoor profession, and how can we address the implicit ways in which our own practices might be contributing to technical orientations to theory? In the following discussion, we share some of our reflections on these questions, and how we responded through curriculum and pedagogical changes. Even though some of these ideas and practical responses are context-specific, we suspect, based on literature reviewed, that they might be relevant beyond our immediate context, and thus useful for others involved in professional education in outdoor education and related fields.

Enabling poes to move beyond methodising theory

A clear message from the research was the need for more explicit treatment and ‘meta-level’ exploration (cf. Garvey & Vorsteg, 1995; Sjølie, 2014b) of the theory-practice nexus in course activities and dialogue. This echoes the recommendations of researchers examining similar issues in teacher education more broadly (e.g. Dye, 1999; Ketter & Stoffel, 2008; Russell, 1988). POEs may need support to become aware of their own personal theories, and understandings and orientations regarding both formal and implicit theory, and to consider the implications of their theories, understandings, and orientations for their teaching and leading. Facilitation of POEs’ experiences during courses plays an important role in this respect. Through careful facilitation, teacher educators can create space for reflective dialogue about theory and practice that promotes such self-awareness. With this in mind, we became more explicit in our teaching of theory and how it informed practice, and, when POEs were observing each other’s practice, for example, they were encouraged to unpack what they saw in terms of formal theory and practice in context, and to be mindful of technical and other ways of engaging with theory.

This kind of mindfulness relates to the need for a *critical, reflexive* approach to the exploration of theory (implicit, personal, and formal theory), including not only critical interrogation of formal theories in focus, but also critical attention to the nature of theory itself, and how we deal with theory and practice as constructs in our courses and in the profession. Do we, for instance, treat formal theory as true, uncontested, stable, or self-evident? Through critical dialogue and inquiry-based activities, theories can be examined in terms of their limitations and possibilities, and formal theories in particular can be interrogated in relation to

- the *real world* that they are intended to represent/explain (e.g. how do the theories resonate—or not—with the POEs’ *practical realities*?)
- the social-political-historical contexts in which they have been developed (e.g. how were the theories products of their time? Are they relevant in *this* time and *this* or *that* context?)
- the POE’s personal theories and the implicit theories that pervade outdoor education practice (e.g. how do the formal theories studied relate to the traditions and *mantras* of the outdoor profession?), and vice versa.

Critical work of the nature suggested here is demanding, not least because of the tensions raised by Roberts (2008) of critiquing theory and practice in a marginalised curriculum area. It also requires a significant intellectual *leap* for those POEs already tending to think-act at a technical *level*. However, we suggest that with focussed critical questions in (*classroom*) dialogue about theory and practice, exposure to *critical perspectives* (e.g. via scholarly literature and research that challenges/critiques taken-for-granted theories and assumptions in outdoor education), and even the involvement of POEs in theory-development work, greater critical-awareness among POEs is possible. Through changes in our approaches, we witnessed (anecdotally) a reduction in the tendency to *methodise* theory and a shift to a more thoughtful critiquing of theory as it informed the POEs’ teaching and leadership practice.

As mentioned, through the case study, we came to appreciate how important it was for us to critically examine how *theory, practice, and theory-practice relationships* are represented through the

ways that we talk about them. We asked, 'Do we talk about theory as disconnected from practice?' 'Do we privilege theory over practice or vice versa in our language?' 'Do we slip into "theory-into-practice" discourses and thereby implicitly encourage technically oriented conceptions of theory and practice?' In response to questions such as these, we utilised language in more intentional ways, and hope that this was educative for POEs in terms of better reflecting the complexities of theory and practice and the theory-practice nexus.

Diverse practical experiences of teaching and leading in authentic contexts, and observing teaching and leading in authentic contexts are also relevant here⁴. We believe we have an obligation in OETE to ensure that how POEs encounter theory does not remain at an abstract, decontextualized level. So, opportunities for thinking about theory in relation to practice, for practising decision-making, and for experiencing the uncertainties of teaching and the consequences of decisions and practices (particularly for students) are especially important. And some POEs apparently need prompting to consider these aspects of practice through guided reflection.

However, teacher educators need to be careful not to place preservice teachers in situations that are so overwhelming that survival concerns linked to a technical interest override a practical interest such that opportunities for learning are lost. We need to help preservice teachers move 'past the "survival phase"' (Sjøløe, 2014a) where there is one, to be able to appreciate what is needed and relevant for understanding and acting appropriately in the practical situation at hand, and to be able to draw purposively on the resources available (including theory, if relevant). This can be very challenging in outdoor learning contexts where unpredictable environmental factors and other inherent risks can increase 'complexity and changeability of the pedagogical challenge' (Boyes, 2005, p. 220) and compound a sense of concern for control. It can be even more of a challenge for POEs who have minimal experience in the outdoor activities and places concerned, which was the case in our course for the particular cohort involved in the case study. To strike a better balance in the course between providing experiences in a range of contexts, and allowing POEs a steadier progression in terms of exposure and expectations in new situations and places⁵, we decided to return to the same location instead of choosing different locations for field experiences, using one national park and exploring it in greater depth with each visit. This enabled students to take on more leadership roles in more complete and authentic ways, as they were familiar with the place and could extend not only their leadership practice and knowledge of place but also their teaching and reflective practice.

Conclusion

We have argued in this article that formal theory plays an important role in the professional learning of outdoor educators. However, drawing on a study of a particular OETE course, we have also made the case that, even when preservice teachers see the value of theory, they can engage with it in ways that do not necessarily help them to become better practitioners with a capacity for making good pedagogical decisions. Perhaps this can be said of the outdoor profession more broadly. The nature of teaching and leading in the outdoors is such that *sets of procedures* and formulae for action, whether in the form of *methodised* theory or not, cannot meet the demands of teaching and learning situations. Teaching and leading have technical dimensions, but they are not merely technical endeavours. They require informed context-sensitive judgement about the most appropriate action to take in the situations at hand. They require praxis, not the kind of technical approach to formal theory we saw (and perhaps unwittingly reinforced) among some POEs in the course described.

POEs, and indeed all outdoor educators, need to be aware not only of how theory and practice relate and how theory might help us to make pedagogical judgements, but also of how we engage with theory (formal, implicit, and personal) in our professions. We echo the growing call among outdoor education scholars/professionals for greater scrutiny of theories associated with outdoor education and related professions. OETE courses are well-placed, and have a responsibility, to promote this awareness and scrutiny, especially amidst the kinds of discourses and rationalities

that can so easily dominate our practice traditions. This is important if we are to help aspiring outdoor educators become the teachers and leaders that the outdoor profession and their future students need them to become.

Notes

1. We refer throughout the article to *pre-service teachers*, *pre-service outdoor educators* and *teacher educators*. *Pre-service teacher* refers to the students of initial teacher education programs (also called *student teachers* in academic literature and in the profession), and *pre-service outdoor educator* (POE) refers specifically to pre-service teachers in outdoor education (or similar) initial teacher education programs. *Teacher educator* could be substituted with *lecturer* or *facilitator educator*.
2. *Implicit theory* is used here as a kind of theory that is unconsciously embedded in practice, including 'traditional wisdom of the profession which has been tacitly accepted and internalised or practical theories about ways of working developed and internalised through years of experience' (Grundy, 1987, p. 92). *Personal theory* (cf. Griffiths & Tann, 1992) is an individual's *personalised* theories (implicit or explicit) derived through experience and reflection (McCutcheon, 1992) and linked to values and beliefs (cf. Clark, 1988). We see both implicit and personal theory as highly relevant to the professional learning of POEs despite not being in focus in this paper.
3. Here we are highlighting some of the practices that may have contributed to a technical orientation. There were many approaches, we believe, that had the opposite effect. See Clayton et al. (2014) for an account of these approaches.
4. The POEs in the study actually highlighted the importance of diverse practical teaching and leading experiences (especially extending beyond teaching and leading their peers in the course) for understanding theory–practice relationships.
5. See Brown's (2008) exploration of related tensions in general outdoor education.

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